

## 5.5 Standard Form

$$Ax + By = C$$

$$0x + 0y = 5$$

$$0 + 0 \neq 5$$

A positive

No fractions A, B, C

A and B both can't be 0

Real Numbers

$$y = 3x + 4$$

$$y = 3x + 4$$

*-3x*   *-3x*

$$-3x + y = 4$$

$$\frac{-3x}{-1} + \frac{y}{-1} = \frac{4}{-1}$$

$$3x - y = -4$$

Slope Intercept  
Form  
 $y = mx + b$

Standard  
Form  
 $Ax + By = c$

Standard Form to get slope

$$m = -\frac{A}{B}$$

$$m = -\frac{3}{-1}$$

$$m = 3$$

y-intercept from Standard Form

$$b = \frac{c}{B}$$

$$b = \frac{-4}{-1}$$

$$b = 4$$

$$y = -\frac{3}{4}x + 1$$

$$+\frac{3}{4}x \quad +\frac{3}{4}x$$

$$\frac{3}{4}x + y = 1$$

$$4 \cdot \frac{3}{4}x + 4 \cdot y = 1 \cdot 4$$

$$3x + 4y = 4$$

$$y = 8$$

$$Ax + By = C$$

$$x = 3$$

x-intercept  $y=0$   
y-intercept  $x=0$

p 256

18-28 E

32-40 E